

REMARKS

Claims 1-6 and 9-19 are pending in the application.

Claims 1-5 and 11-19 have been rejected.

Claims 6, 9, and 10 have been allowed.

Claims 9 and 10 have been amended to correct dependency to Claim 6.

No new matter has been added.

Reconsideration of the Claims is respectfully requested.

1. Objection to the Claims

Claims 9 and 10 had been objected to due to incorrect dependency. Appropriate correction has been made.

2. Rejection under 35 U.S.C. Section 103

Claims 1-5 and 11-19 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,220,510 to Everett et al. ("Everett"), in view of U.S. Patent No. 7,036,118 to Ulery et al. ("Ulery").

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP § 2142, p. 2100-125 (Rev. 5, August 2006) (citations omitted).

Everett relates to providing "an application architecture and memory organization which provides for a secure data interaction between applications and allows multiple applications to be accessed while performing a desired task or function." (Everett 2:13-17).

Everett recites an IC card that stores multiple applications and each application, when executed is allocated memory space for its associated data (*see* Everett 3:26-31). "When two applications need to communicate during the same transaction, a system architecture is required to process both applications in an efficient and secure manner. . . . Also, transferred data may be

exposed to unwanted third party access. The solution to this problem . . . [under Everett] *is to selectively interrupt the execution of applications in a secure manner*. This allows the integrity of the applications' data to be maintained and allows the best utilization of the available memory space in the IC card." (Everett 3:50-62).

Everett further recites that an "application abstract machine (AAM), a term for the memory allocation and organization for the data stored by each application, is created for each application stored on the IC card, which is executed by the processor on the card." (Everett 4:7-11). "Each application has a data memory space which is virtually allocated and mapped onto the physical memory addresses available in the IC card memories. . . . At a general level, each AAM space created for each application being executed includes two separate address spaces, one for the program code itself and one for the program data which is stored and/or used by the application. The programmed data address space is divided into three segments: a Static segment, a Dynamic segment, and a Public segment" (Everett 4:14-27).

As such, Everett recites an IC card that *stores multiple applications and securely transfers data between the applications*. To this end, the AAM creates AAM memory space for storing the program code of the application and for storing the application's data. *The AAM memory space for storing the application's data is divided into three sections: static, dynamic, and public*. The public section stores the data that is transferred between the applications, where the transferring is done in an interrupt manner. (emphasis added). In other words, Everett does not recite an overlay mechanism to address any limited capacity of its volatile memory.

Ulery relates to "eliminating the need for special-purpose caching hardware while, at the same time, removing the dependence on time-consuming, error-prone, art-based manual paging." (Ulery 2:16-20). Ulery recites that "[object] placement consists of designating objects as either static (resident for the duration of the application) or overlay (paged as needed) and *fixing their locations in fast memory*." (Ulery 2:64-67). That is, Ulery recites providing for expedited application execution via "paging," instead of addressing the limited capacity of RAM via an overlay mechanism.

In contrast to the cited references, Applicant's Specification recites that "[since] only a portion of the programs resident in memory 16 may be loaded into RAM 33 at a given time, *an overlay mechanism is implemented in order to swap in and out those program(s) which may be needed for current execution by various units of the handheld device, including those components*

present within integrated circuit 12. . . . [P]rograms employed as satellite algorithms generally comprise those programs which tend to be more specific in function and are generally not algorithms that stay for a relatively long period of time. Since the satellite algorithms may not be employed other than for short term use or for performing a single use, feature or application, *the satellite algorithms may be replaced (swapped) by other algorithms as tasks are completed.* Accordingly, in one embodiment for practicing the invention, the dynamic algorithm section 274 comprises a portion of RAM, which may be regarded or referred to as an overlay space in which satellite programs/algorithms may then be loaded and subsequently replaced by other satellite programs/algorithms as tasks are performed and completed.” (Specification at page 38, *ll.* 30-31 to page 39, *ll.* 1-15) (emphasis added)..

In kind, Applicant’s Independent Claim 1 recites, *inter alia*, a “method comprising: allocating a first portion of a first memory as a static section to store a main program which uses functional programs stored in a second memory; and allocating a second portion of the first memory as a dynamic section to store other programs, the dynamic section *including a plurality of overlay spaces to overlay the functional programs loaded from the second memory to conserve memory capacity of the first memory.*” (emphasis added).

Also, Applicant’s Independent Claim 11 recites, *inter alia*, “apparatus comprising: a first memory having a first portion as a static section to store a main program which uses functional programs and a second portion as a dynamic section to store other programs which reside in the first memory for a shorter duration than the main program, the *dynamic section including a plurality of overlay spaces to overlay functional programs*; and a second memory operably coupled to store the functional programs and to load a functional program specified by a resource identifier in the main program *to a corresponding overlay space specified by an entry point specified by the main program.*” (emphasis added).

Further, Applicant’s Independent Claim 15 recites, *inter alia*, a “multi-function handheld device comprising: a system on a chip integrated circuit that includes an internal memory arranged to have *a first portion as a static section* to store a main program which uses functional programs and *a second portion as a dynamic section* to store other programs which reside in the internal memory for a shorter duration than the main program, *the dynamic section including a plurality of overlay spaces to overlay the functional programs*; and an external memory operably coupled to the integrated circuit to store the functional programs and to load a functional program

specified by a resource identifier in the main program to a corresponding overlay space specified by an entry point specified by the main program.” (emphasis added).

Accordingly, Applicant respectfully submits that there has not been a *prima facie* showing that substantiates the rejection of Applicant’s claimed invention. There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the IC application security card of Everett and the automated paging device of Ulery to achieve Applicant’s claimed invention as set out in Independent Claim 1 and claims 2-5 that depend therefrom, as set out in Independent Claim 11 and claims 12-14 that depend directly or indirectly therefrom, or as set out in Independent claim 15 and claims 16-19 that depend therefrom. Further, Applicant respectfully submits that the neither Everett nor Ulery teach or suggest all of Applicant’s claim limitations. Applicant respectfully requests that the rejection to these claims be withdrawn.

3. Allowed Subject Matter

Applicant notes with appreciation the allowance of claims 6, 9, and 10.

4. Conclusion

As a result of the foregoing, the Applicant respectfully submits that claims 1-5 and 9-19, in addition to claims 6, 9, and 10, are in condition for allowance, and respectfully requests an early allowance of such Claims.

If any issues arise, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at ksmith@texaspatents.com.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Garlick Harrison & Markison Deposit Account No. 50-2126.

Respectfully submitted,

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